

Abstract

5 ~~A~~The surface of a phosphor particle is coated with a coating member
made of a material that is different from the phosphor in chemical vapor-phase
reaction. The coating member is made of any of metal oxide, metal nitride and
metal oxynitride. The coating member coats the surface of the phosphor
10 ~~with~~~~whereby~~ having a substantially smooth film, or is formed such that a large
number of fine particles, which are relatively smaller than the phosphor particle,
aggregate to coat the whole surface of the phosphor particle. The coating
15 member contains at least one metallic element selected from the group
~~including~~~~consisting of~~ Al, Si, and rare earth elements. In addition, the phosphor is
a transparent water-soluble phosphor and is an alkaline-earth silicon-nitride
phosphor, an alkaline-earth silicon oxynitride phosphor, or the like. ~~A~~The BET
value of the coated phosphor is 1.0 to 10 times the BET value before coating.
The average thickness of the coating is 10 nm to 500 nm.